

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Substitute for form 1449/PTO

Complete if Known  
Application Number NEW APPLICATION  
Filing Date HEREWITH  
First Named Inventor Milan K. Kta  
Attorney Docket Number 1035-BI4282

Sheet 1 of 3  
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## U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. 1	U.S. Patent Document Number	Kind Code 2 (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
SSS	AA	3,655,439		SEITER	04/11/1972	
SSS	AB	3,658,586		WANG	04/25/1972	
SSS	AC	3,796,597		V.R. PORTER, et al.	03/12/1974	
SSS	AD	4,177,321		NISHIZAWA	12/04/1979	
SSS	AE	5,741,724		RAMDANI, et al.	04/21/1998	
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SSS	AG	5,530,267		BRANDLE, JR., et al.	06/25/1996	
SSS	AH	6,104,529		BRANDLE, JR., et al.	08/15/2000	
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SSS	AK	2003/0007520	A1	KOKTA, et al.	01/09/2003	

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SSS	AL	EP	0 148 656	A1	AUZEL, et al.	11/16/1984		<input type="checkbox"/>
	AM							<input type="checkbox"/>

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Examiner Initials *	Cite No. 1	Title of Publication	Date of Publication of Cited Document MM-DD-YYYY
SSS	AV	YUMASHEV K.V., et al., "Co <sup>2+</sup> -doped spinels saturable absorber Q-switches for 1.3-1.6 $\mu$ m solid state lasers", OSA TRENDS IN OPTICS AND PHOTONICS. ADVANCED SOLID STATE LASERS., Vol. 34, pp. 236-239, 2000. XP008017966	
SSS	AW	YUMASHEV, K.V., et al., "Passive Q-switching of 1.34- $\mu$ m neodymium laser using Co <sup>2+</sup> :LiGa <sub>5</sub> O <sub>8</sub> and Co <sup>2+</sup> :MgAl <sub>2</sub> O <sub>4</sub> ", CONFERENCE DIGEST, 2000, 1 page. XP002242959	
SSS	AX	OKTYABRSKY, S., et al., "Crystal structure and defects in nitrogen-deficient GaN", MRS Internet J. Nitride Semicond. Res, G6.43, pp. 1-6, 1999.	
SSS	AY	KLEBER, W., et al., "Zur epitaxie von galliumnitrid auf nichtstochiometrischem spinell im system GaCl/NH <sub>3</sub> /He", CRYSTAL RESEARCH AND TECHNOLOGY, Vol. 10, No. 7, pp. 747-758, 1975. (English Abstract)	
SSS	AZ	SEIFERT, A., "Nachweis von stapelfehlern in GaN-epitaxieschichten mittels elektronenbeugung", CRYSTAL RESEARCH AND TECHNOLOGY, Vol. 10, No. 7, pp. 741-746, 1975. (English Abstract)	
Examiner Signature			Date Considered 11/14/04

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SSS	BA	6,533,874	B1	VAUDO, et al.	03/18/2003	
SSS	BB	4,627,064		AUZEL, et al.	12/02/1986	
SSS	BC	4,000,977		FALCKENBERG	01/04/1977	
	BD					
	BE					
	BF					
	BG					
	BH					
	BI					
	BJ					
	BK					

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	BL						<input type="checkbox"/>
	BM						<input type="checkbox"/>

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Examiner Initials *	Cite No. 1	Title of Publication	Date of Publication of Cited Document MM-DD-YYYY
SSS	BW	OHSATO, H., et al., "Epitaxial orientation and a growth model of (0 0 - 1) GaN thin film on (1 1 1) spinel substrate", JOURNAL OF CRYSTAL GROWTH, Vol. 189/190, pp. 202-207, 1998.	
SSS	BX	YANG, H. -F., et al., "Microstructure evolution of GaN buffer layer on MgAl <sub>2</sub> O <sub>4</sub> substrate", JOURNAL OF CRYSTAL GROWTH, Vol. 193, pp. 478-483, 1998.	
SSS	BY	DUAN, S., et al., "MOVPE growth of GaN and LED on (1 1 1) MgAl <sub>2</sub> O <sub>4</sub> ", JOURNAL OF CRYSTAL GROWTH, Vol. 189/190, pp. 197-201, 1998.	
SSS	BZ	SHELDON, R., et al., "Cation Disorder and Vacancy Distribution in Nonstoichiometric Magnesium Aluminate Spinel, MgO · Al <sub>2</sub> O <sub>3</sub> ", J. AM. CERAM. SOC., Vol. 82, No. 12, pp. 3293-3298, 1999.	
Examiner Signature	<i>Stephen Starni</i>		Date Considered 11/14/04

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Sheet 3 of 3

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SSS	AAA	KULESHOV, N.V., et al. "Co-doped spinels: promising materials for solid state lasers", LONGER WAVELENGTH LASERS AND APPLICATIONS, Vol. 2138, pp. 175-182, 1994. XP008017848	
SSS	AAB	KULESHOV, N.V., et al. "Absorption and luminescence of tetrahedral Co <sup>2+</sup> ion in MgAl <sub>2</sub> O <sub>4</sub> , Vol. 55, no. 5-6, pp. 265-269, 1993. XP008017849	
SSS	AAC	NIKISHIN, S.A., et al., "Gas source molecular beam epitaxy of GaN with hydrazine on spinel substrates", APPLIED PHYSICS LETTERS, Vol. 72, No. 19, pp. 2361-2363, 1998. XP000755963	
SSS	AAD	HAISMA, et al., "Lattice constant adaptable crystallographics", JOURNAL OF CRYSTAL GROWTH, Vol. 102, pp. 979-993, 1990. XP002250056	
SSS	AAE	TAMURA, K., et al., "Epitaxial growth of ZnO film on lattice-matched ScAlMgO <sub>4</sub> (0001) substrates", JOURNAL OF CRYSTAL GROWTH, Vol. 214-215, pp. 59-62, 2000. XP004200964	
SSS	AAF	WYON, et al., "Czochralski growth and optical properties of magnesium-aluminum spinel doped with nickel", JOURNAL OF CRYSTAL GROWTH, Vol. 79, pp. 710-713, 1986. XP002250057	
SSS	AAG	TSUCHIYA, T., et al. "Epitaxial growth of InN films on MgAl <sub>2</sub> O <sub>4</sub> (1 1 1) substrates", JOURNAL OF CRYSTAL GROWTH, Vol. 220, pp. 185-190, 2000.	
SSS	AAH	KURAMATA, Akito, et al., "High-quality GaN epitaxial layer grown by metalorganic vapor phase epitaxy on (111) MgAl <sub>2</sub> O <sub>4</sub> substrate", APPL. PHYS. LETT., Vol. 67, No. 17, pp. 2521-2523, 1995.	
SSS	AAI	MITCHELL, T., "Dislocations and Mechanical Properties of MgO- MgAl <sub>2</sub> O <sub>3</sub> spinel single crystals", J. AM. CERAM. SOC., Vol. 82, No. 12, pp. 3305-3316, 1999.	
SSS	AAJ	HELLMAN, E., "Exotic and Mundane substrates for gallium nitride heteroepitaxy", BELL LABORATORIES, THC2, Murray Hill, NJ.	
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Examiner Signature	<i>Stephen Stern</i>		Date Considered 11/14/04

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Application Number 10/669,141  
Filing Date September 23, 2003  
First Named Inventor Milan Kokta  
Group Art Unit  
Examiner Name  
Attorney Docket Number 1035-BI4282

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	AH					
	AI					
	AJ					

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	AL							<input type="checkbox"/>
	AM							<input type="checkbox"/>
	AN							<input type="checkbox"/>
	AO							<input type="checkbox"/>

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	AW		
	AX		
	AY		
	AZ		

Examiner Signature	<i>Steph Shen</i>	Date Considered	11/17/04
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